J. A. LONG.

ARTIFICIAL LEG.

APPLICATION FILED DEC. 18, 1909.

966,225.

Patented Aug. 2, 1910.

Fig. 3.

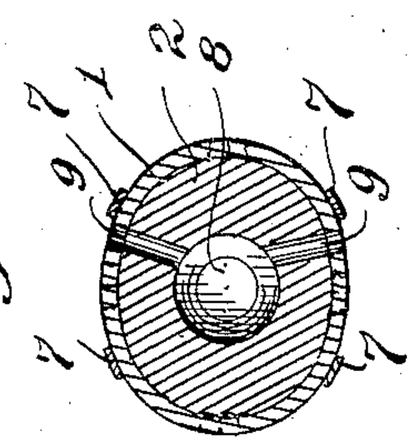


Fig. 4.

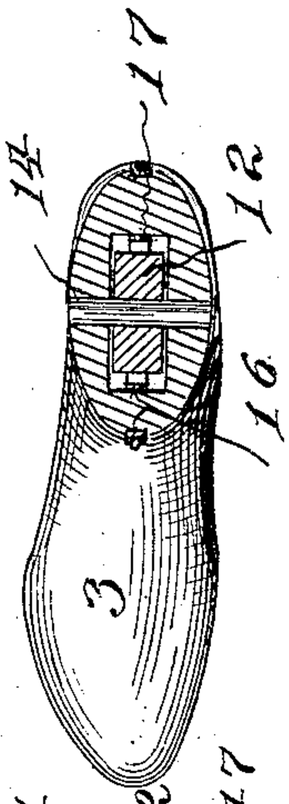


Fig. 2.

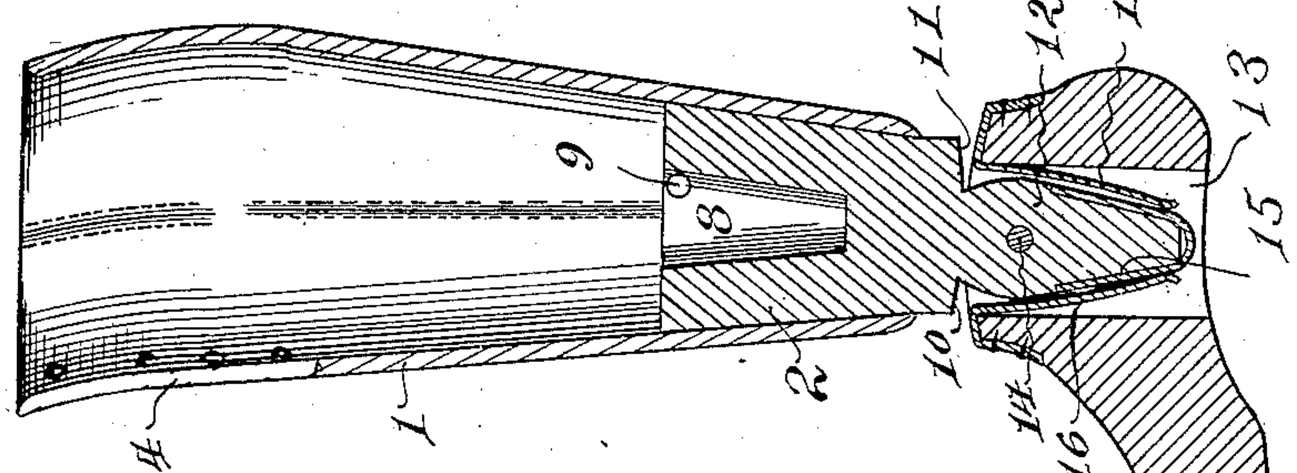
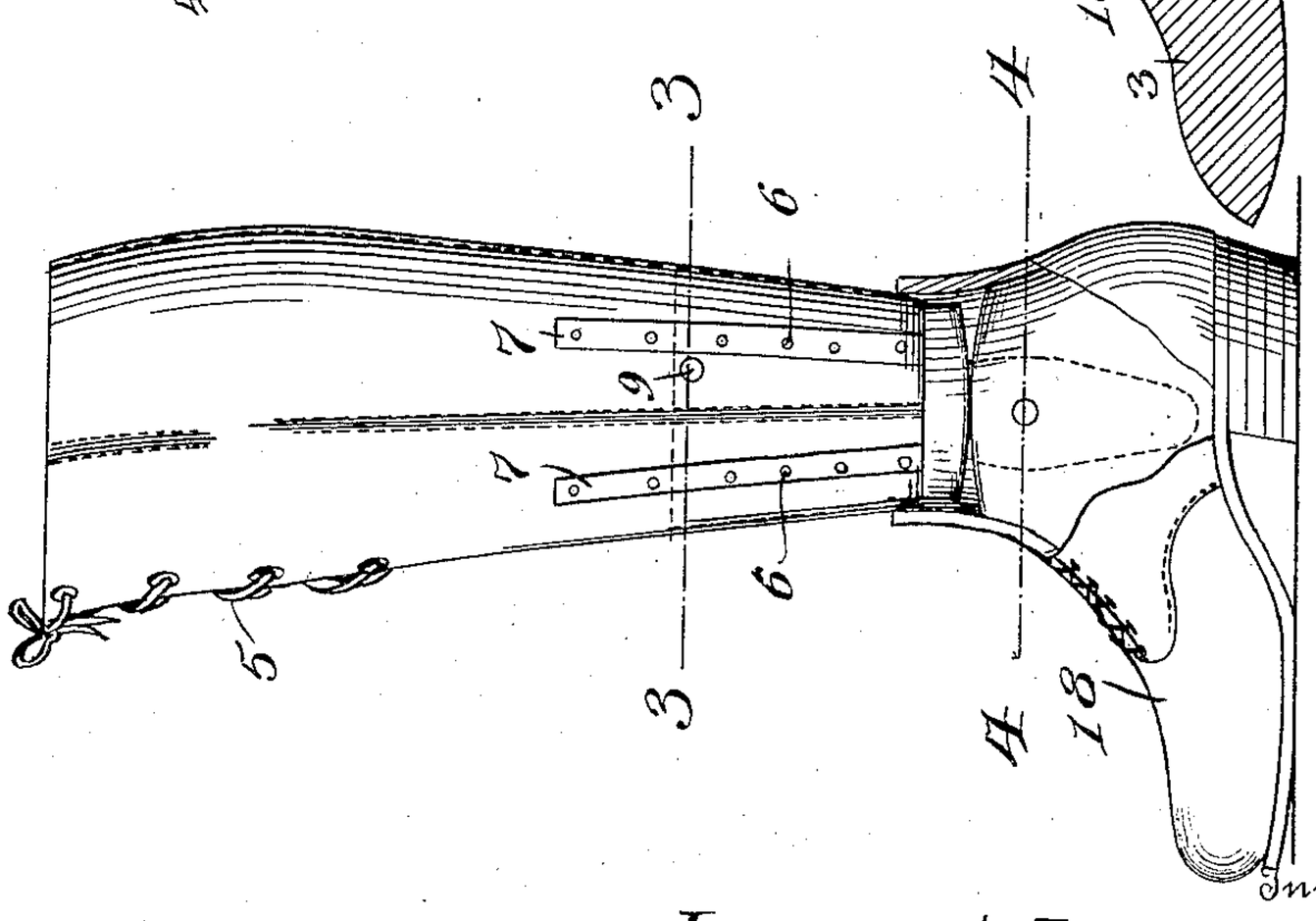


Fig. 1.



Witnesses

Horace A. Lybrand

C. C. Hines.

Inventor

James A. Long

By Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

JAMES A. LONG, OF FAIR MOUNT, GEORGIA.

ARTIFICIAL LEG.

966,225. Specification of Letters Patent. Patented Aug. 2, 1910.

Application filed December 18, 1909. Serial No. 533,788.

To all whom it may concern:

Be it known that I, JAMES A. LONG, a citizen of the United States, residing at Fair Mount, in the county of Gordon and State of Georgia, have invented new and useful Improvements in Artificial Legs, of which the following is a specification.

This invention relates to artificial legs, the object of the invention being to provide a limb of this character which will be comfortable in use and possess substantial features of merit over prior devices of its kind in point of simplicity of construction and inexpensiveness of production.

The invention consists of the features of construction, combination and arrangement of parts hereinafter fully described and claimed, reference being had to the accompanying drawing, in which—

Figure 1 is a side elevation of an artificial leg embodying my invention, showing a shoe applied to the foot portion thereof and partially broken away to expose said foot portion. Fig. 2 is a vertical longitudinal front to rear section through the leg. Figs. 3 and 4 are horizontal transverse sections on the lines 3—3 and 4—4 of Fig. 1.

Referring to the drawings, 1 designates the upper leg section, 2 the lower leg section and 3 the foot portion or foot section of the limb.

The section 1 is hollow to receive the stump of the leg of the wearer and is shaped to correspond substantially in contour thereto. It is preferably made of leather or other suitable material possessing durability and a sufficient degree of flexibility. In practice, it is contemplated to make said section 1 of leather, the outer surface of which is varnished or otherwise treated to render it water proof. Proper shape may be given the section 1 in any preferred manner, and as shown the upper front portion of said section is provided with a longitudinal slit 4, the meeting edges of which are connected by a lacing thong 5, by which said leg section may be contracted to snugly fit the limb of the wearer and retain its position thereon.

The lower leg section 2 fits within the lower end of the upper leg section 1 and comprises a block tapered downwardly and forming a rigid support for the lower extremity of the upper leg section. The upper leg section is secured to the block or lower leg section by fastenings 6, which preferably pass through pairs of oppositely arranged metallic reinforcing strips 7 which strengthen the fastenings at their point of connection and reinforce the lower portion of the upper leg section. In the block is formed a cavity 8 opening through the top thereof, which cavity lightens the block and at the same time serves to afford ventilation; at its lower end the cavity is in communication with ducts or passages 9 leading therefrom transversely through the block and lower portion of the upper leg section.

The lower end of the section 2 is provided with front and rear rounded contact shoulders 10 and 11 and a centrally depending tapered tang or extension 12, which latter projects downward into a vertical opening 13 in the rear portion of the foot section 3 and is pivotally mounted therein on a transverse pin 14, which may be removed when it is desired for repairs or other purposes. The tang or extension 12 is freely movable from front to rear in the opening 13 and has its lower portion reinforced by a V-shaped wear strip 15 which lines the front and rear surfaces thereof. The shoulders 10 and 11 are adapted to abut against the upper extremities of spring strips 16 and 17 which are countersunk in recesses in the upper end of the foot portion 3 and nailed or otherwise suitably secured thereto. The free ends of these spring strips project downwardly into the opening 13 in front and rear of the tang 12 and bear against the wear strip thereof to yieldingly retain the leg portion of the device as a whole in a vertical position and permit the same to have a yielding articulating movement on the foot portion. By this construction a yielding joint of an efficient character is provided in a simple manner and without the use of cumbersome connections.

In practice, it will be understood that a shoe 18 is fitted upon the foot section 3 in the usual manner, and the upper leg section 1 secured to the limb of the wearer, the pivotal connection between the lower leg section and foot portion permitting the artificial limb to be articulated to closely simulate the movements of a natural limb. The upper leg section, may of course, be lined with any suitable cushioning material to prevent chafing of the limb of the wearer, and by the construction described it will be seen that ample ventilation is afforded to

secure comfort, while disassociation of the parts for repairs or other purposes is readily permitted.

I claim:—

An artificial limb comprising an upper hollow leg section, a lower leg section secured thereto and provided with a depending tapering extension, a foot portion having an opening in which said extension is pivotally mounted, and leaf springs secured at their upper ends to the foot portion and depending convergently into said opening, said springs being arranged to bear against the inclined front and rear edges of said tapered extension to limit the pivotal movement thereof.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES A. LONG.

Witnesses:

ISAAC GRANT,

ROSCOE PICKETT.